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ABSTRACT

Intended to serve as a guide to the development of basic computer competencies for students in teacher preparation programs or as inservice training for teachers, this primarily self-instructional manual provides basic information, worksheets, computer programs, and hands-on learning activities for 16 proficiencies related to computer literacy. Orientation is toward Apple microcomputers, and, in some cases, specific software, though the exercises can be modified for other hardware and software. The following topics are covered: learning terminology, maintenance procedures, inserting disks and running programs, initializing a blank diskette, copying a diskette and a single file, writing a program in BASIC, using a printer, types of educational computer programs, class management instructional programs, evaluating software programs, programs for one grade or subject, problem solving using LOGO, using an authoring system, word processing, using a modem to access the Alaska Knowledge Base, and identifying and describing the purpose of reference materials. A computer proficiency checklist is included. (LMM)

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MICROCOMPUTER LABORATORY MANUAL

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1984

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TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

Welcome to the Computer Lab!

Educator's Guide To The

apple computer

We hope you'll enjoy your study of computer use in education. The lab guide will give you an overview and assist you in completing the tasks for each proficiency, but please note that it is not intended to serve as the sole source of information for your lab work. (The lab assistants are there to help you!) Neither is it intended to be a complete course in computer literacy, much less in programming, but by the time you have completed the tasks, you will have a fairly good understanding of the manner in which computers are currently being used in the schools. In addition, you will be aware of current trends and reference materials that will help keep you up to date.

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INTRODUCTION

This document is intended to serve as a guide to development of basic computer competencies on the part of students in teacher preparation programs or as inservice training for teachers. The learning activities are intended to be fairly self instructional but in some cases help from a laboratory assistant or other knowledgeable person may be needed.

This manual is oriented toward Apple microcomputers and, in some cases, particular software. The exercises can be easily modified, however, for other hardware and software.

Upon completion of your work in the lab, you will know how to:

* define the most commonly used terms in computer jargon;
* list and describe the types of educational computer programs that are currently available;
* run menu driven programs and those that require selection from a catalog;
* run a variety of programs that are available in your subject or grade level area;
* use a class management program for instruction
* use a printer;
* use an authoring system to create tests, reviews, puzzles and lessons;
* use a data base program for instruction and classroom management
* use a word processing program for instruction and your own enjoyment!
* evaluate software;
* initialize a diskette;
* copy a diskette and a single file;
* write a short program in BASIC;
* use a modem to access information;
* perform basic maintenance on the Apple;
* find helpful reference materials for using the Apple in the classroom.

This may look like a long list, but you'll find that it doesn't take very long to complete all the tasks and it's really a lot of fun! Each task is listed on the checklist, which is the last page of this guide. If you are already proficient in certain areas, all you must do is demonstrate the abilities to the computer lab assistant, who will then sign the appropriate areas on the checklist. If you need assistance, refer to the appropriate sections of this guide and see a lab assistant. You will note that each task is color coded; look for colors, not page numbers. The lab is in CAS 322, and the hours are posted on the door.

Once you have completed the checklist, you will be given a lab card which will allow you to use the lab during School of Education office hours whether or not a lab assistant is there. You will also receive a certificate of completion and copy of the completed checklist for your files.

University of Alaska, Anchorage
School of Education

COMPUTER LAB USER'S PERMIT

Name _____

Approved_____ Date _____

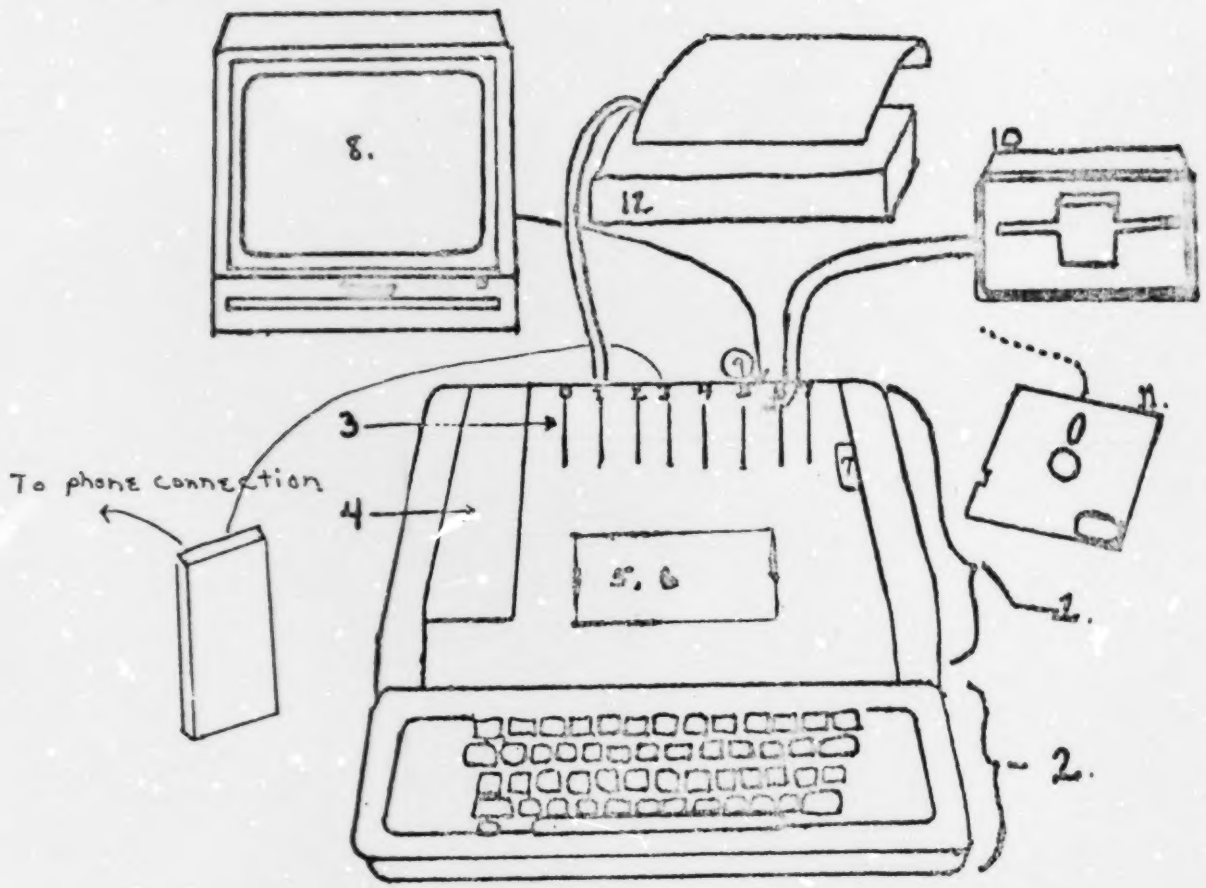
TASK 1: LEARNING TERMINOLOGY

At first glance, the computer seems very forbidding to many people. Relax! It's not that tough, and it will seem less foreign to you once you understand the terminology associated with its use. Since it is difficult to learn a lot of terms all at once, the following pages present just a few to get you started. The lab assistant will answer your questions and show you the various parts of the hardware, what the software looks like and where it is located, and what the prompt and cursor look like on the monitor.

Complete the terminology worksheet that accompanies this section and the lab assistant will sign the appropriate area on the checklist.

You are on your way!

MEET THE APPLE



PARTS

1. Motherboard of Computer
2. Keyboard for Input
3. Slots for Cards

   Printer Card in Slot 1
   Disk Control Card in Slot 6
   Language Card in Slot 0
4. Power Supply
5. ROM Chips
6. RAM Chips
7. RF Modulator for TV
8. Monitor/T.V./CRT
9. Video Out jack for connecting monitor
10. Disk Drive
11. Floppy Disk or Diskette
12. Printer
13. Modem

TERMINOLOGY

BOOT:	A word that describes the process of inserting diskettes and powering up the computer.
INTERFACE CARDS:	Boards which contain electrical circuits and fit into slots 0-7 on the motherboard.
CHIP:	A small piece of silicon with electrical circuits imprinted on it.
DISK DRIVE:	A mechanical and electrical device with motors and moving parts which stores and retrieves data on a disk.
DISKETTE:	A flexible disk coated with electronic recording material.
HARDWARE:	The physical equipment that makes up a computer system.
LANGUAGE:	A symbolic instructional code that can be used to write programs.
MENU:	A list of choices displayed in a computer program that may be selected by pressing the number or letter of the program desired.
PROMPT:	A symbol that signifies that the computer is awaiting a command or input from the user.
SOFTWARE:	Generally used for computer programs, but also used to refer to everything that is not equipment.
CATALOG:	A list of programs on the disk obtained by typing CATALOG at the prompt.
RAM:	Random Access Memory. Referred to as workspace memory inside computers. A memory unit whose contents can be altered.
ROM:	Read Only Memory. User cannot store information or alter contents of ROM.
DOS:	Disk Operating System. Information stored on disk to provide needed operating information for the computer.

TERMINOLOGY WORKSHEET

Match the term with its definition:

1. _____ Chip
2. _____ Boot
3. _____ DOS
4. _____ Menu
5. _____ Interface Cards
6. _____ Hardware
7. _____ ROM
8. _____ Disk Drive
9. _____ Language
10. _____ Catalog
11. _____ Diskette
12. _____ Prompt
13. _____ RAM
14. _____ Software

a. Boards which contain electrical circuits and fit into slots 0-7 on the motherboard.

b. A flexible disk coated with electronic recording material.

c. A word that describes the process of inserting diskettes and power up the computer.

d. A symbol that signifies that the computer is awaiting a command or input from the user.

e. A symbolic instructional code that can be used to write programs.

f. The physical equipment that makes up a computer system.

g. A list of programs on the disk that may be selected by pressing the number or letter of the program desired.

h. Generally used for computer programs, but also used to refer to everything that is not equipment.

i. A small piece of silicon with electrical circuits imprinted on it.

j. A mechanical and electronic device with motors and moving parts which stores and retrieves data on a disk.

k. A list of programs on the disk obtained by typing CATALOG at the prompt.

l. Random Access Memory. Referred to as workspace memory inside computers. A memory unit whose contents can be altered.

m. Read Only Memory. User cannot store information or alter contents of ROM.

n. Disk Operating System. Information stored on disk to provide needed operating information for the computer.

TASK 2: DEMONSTRATE MAINTENANCE PROCEDURES

When you complete this task, you will have a hands-on experience with the inside of the computer. You should feel comfortable with basic maintenance procedures. Occasionally, a computer will not function properly. Generally, it is a simple matter to correct the problem. Sometimes just turning the computer off and on again will be effective.

FIRST: Ask the lab assistant for the video cassette labeled Troubleshooting Your Apple. Take it to the audio-visual lab next door and watch the "Troubleshooting" program. (Feel free to watch the three other programs on the cassette if you are so inclined, but they are not required.) The film makes number of good points, but be sure to remember the following cardinal rules:

* DISCONNECT POWER SOURCE FROM THE COMPUTER BEFORE YOU OPEN THE LID OF THE COMPUTER!!!

* DO NOT HAVE FOOD OR DRINKS NEAR THE COMPUTER!!!

* DO NOT PLACE A DISKETTE ON TOP OF A MONITOR, DRIVE OR NEAR ANY ELECTRICAL FIELD!

  In addition, diskettes should be stored in an upright position and should not be exposed to extreme temperatures. Handle them with care and remember not to touch the exposed surfaces.

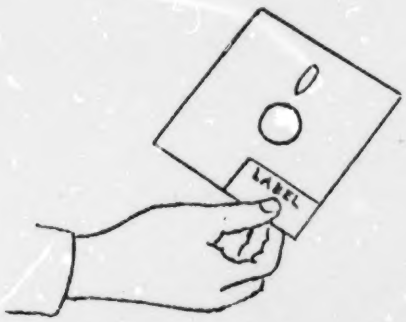
SECOND: Please demonstrate your knowledge of these procedures to the lab assistant. Before you begin, please have a lab assistant help you. He/she will show you the proper maintenance procedures for the following:

a. seating chips
b. connecting and disconnecting disk drive cables
c. connecting and disconnecting cards
d. cleaning card connections
e. changing a chip

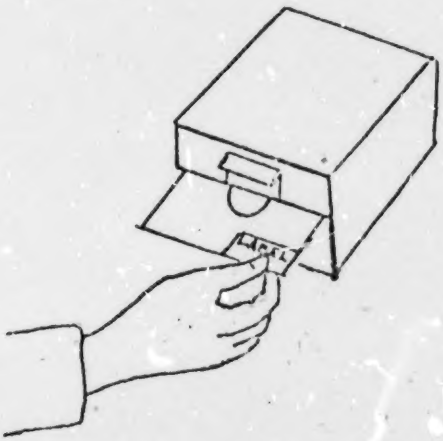
TASK 3: INSERTING DISKS AND RUNNING PROGRAMS

Upon completion of this task, you will be able to boot a disk using 2 methods and select and RUN programs from a Menu and a CATALOG.

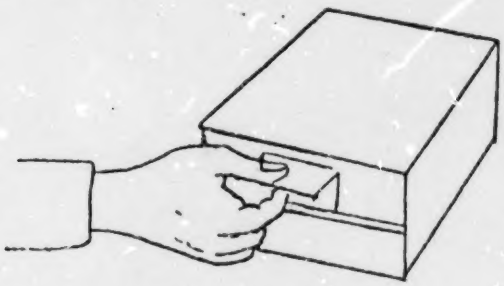
Get the disk entitled APPLE KEYBOARD TUTORIAL which is in the binder labeled MECC Demo. This program will teach you the function of all the special keys on the Apple keyboard. Then you will be ready to select other programs.



Hold the diskette in the right hand between the thumb and the index finger, placing the thumb on the label. Be careful not to touch the oval area that exposes the disk itself.



Open the door of the disk drive. With the label facing up, insert the diskette slowly into the drive, until it settles in.



Press the drive door down slowly until it clicks shut. (On the small drive, turn knob down.)

There are two methods for booting the Disk Operating System and running programs, and you should know both of them.

1. AUTOSTART: (Computer is off.) Most diskettes will boot the system when the computer is turned on. Follow these instructions for using the autostart method.

    1. Turn on the "Monitor" (TV).

    2. Make sure the diskette is in the disk drive.

    3. Close the drive door.

    4. Ground yourself by touching the metal plate by the off-on switch in the back left corner of the Apple and turn the Apple on.

    5. The red light on the disk drive will come on, and you will hear whirring (and sometimes other) noises. The drive light should go out in 10-20 seconds. If it doesn't, do not open the disk drive door. Press the RESET button, wait for the light to go out, and turn the Apple off. (Note: on some Apples, you must hold down the CONTROL button and press the RESET button in order to reset the system.) Take the diskette out, put it back in again, and turn the power on. If it fails to boot, call the lab assistant.

    6. At this point will happen: the diskette heading will appear on the screen and you may press the space bar to continue.

    7. After completing the KEYBOARD TUTORIAL, remove the diskette from the drive, DO NOT turn the computer off, and turn to the next page.

#2 WARM START (Computer is on.) Sometimes you will finish using one diskette and wish to change to another without turning the computer off and on. Follow this procedure.

1. MAKE SURE THE RED LIGHT ON THE DRIVE IS OFF. Then, remove the diskette you had been using and insert the diskette you would like to use.

2. Before you can give the computer any commands, you must have a prompt and a cursor. If you have been using another program, first press RESET (or CONTROL and RESET if necessary to reset your computer) to get the prompt and cursor. (NOTE: Some programs will not give you a prompt and cursor after pressing either RESET or CONTROL and RESET. In such a case, you must turn the computer off in order to change programs.)

3. Get the disk titled MECC DEMO.

4. Insert in Drive. Type]PR#6 <press RETURN>

5. The red light on the drive will come on and the procedures from this point on are the same as for the autostart.

Read the instructions listed below for selecting programs from the menu. Pick the program entitled APPLE FEATURES and afterwards one other program of your choice. (Note: The last program you run will help satisfy the requirement for this task.)

MENUS: The diskette heading (MECC logo or other software producer logo) appears when you boot the disk. Follow these steps:

1. Press the space bar, to get the menu. (NOTE: Sometimes you may omit this step because the menu will appear automatically.)

2. Follow the instructions on the screen to run the program you want to run. (Generally, you type the number of the program you want to run and press RETURN.) That's all there is to it! Easy, right?

3. When you have finished this task remove that diskette and select CATALOG DEMO.

4. Use the warm start method.

CATALOGS: If a brief heading, followed by a prompt and a cursor, appears when you boot a disk, do the following:

1. Type]CATALOG <press RETURN> (NOTE: Occasionally programs are set up to go directly to the catalog when the HELLO program runs.)

2. The red light on the drive will come on and in a few seconds you will see something that looks like this:

```
*A 002 HELLO
 A 002 NAME
 I 002 DI
 T 003 WORDS1
 B 003 PIC.BEAR
```

This is a catalog. The asterisk in front of a file means that the file has been locked and cannot be changed until it is unlocked. Don't concern yourself with that now.

The first letter denotes the language in which the program is written. "A" stands for Applesoft BASIC, "I" is for Integer, and "B" means binary. "T" indicates a text file, which is not a program but is extra information that is used in running some other program on the disk. In the lab, you will be working with Applesoft BASIC and Integer BASIC.

The numbers indicate how much space the program uses on the disk.

The next set of letters or letters and numbers is the program name.

3. To run a program that is written in Applesoft BASIC, type]RUN programname. Be sure to type the name exactly as it appears in the catalog, spaces and all. Do not type the letter or numbers preceeding the program name on the catalog listing. When you have typed it correctly, press RETURN.

4. Once the program you selected has been completed, you will probably get a prompt and a cursor. Type CATALOG again to see what other programs are on the diskette.

5. To run a program that is written in Integer BASIC, first try running it the same way as Applesoft programs. If the diskette's HELLO program automatically loads Integer when the diskette is booted, the program will run. If not, you will get an error message that read LANGUAGE NOT AVAILABLE.

Remove the diskette from the drive and boot DOS with the 3.3 System Master diskette, which will automatically load Integer into the language card. (Note: All of the computers in the lab have language cards, but some of the computers in the schools do not. Computers must have either Integer cards or 16K cards in order to run programs written in Integer.) (Apple IIe has the extra memory for languages.)

Once the disk drive light has gone off and a flashing cursor appears on the screen, remove the DOS diskette and insert the diskette that contains the programs you want to see. DO NOT TYPE PR#6, that will erase the language you just loaded.

Type CATALOG to get a list of the programs. Then type RUN and the name of the program you want to use.

TASK 4: INITIALIZE A BLANK DISKETTE

When a new, blank diskette is purchased, it must be initialized before it can be used in the computer. This process "formats" the diskette for use with one particular kind of computer system, in this case, the Apple.

Before you begin this process, make sure that the disk you want to initialize is either a new, blank diskette or an old diskette that contains programs you no longer want. (The process will erase everything that is currently on a diskette.) Then, proceed as follows:

1. Boot the Disk Operating System (DOS) with the System Master diskette.

2. Remove the DOS System Master diskette.

3. Insert the blank diskette.

4. Type the following and press RETURN after each entry:

```
]NEW
]10 HOME
]20 PRINT "THIS IS A SLAVE DISK FOR (Your name)."
]30 PRINT "(date)"
]40 END
]INIT HELLO
```

5. Strange sounds will emanate from the computer. When the disk drive light goes out, which takes about 1 1/2 to 2 minutes, the diskette will be initialized.

6. Use a gummed label and write your name on the label before you put the label on the diskette. Writing on the diskette itself may damage it.

TASK 5: COPY A DISKETTE AND A SINGLE FILE

By the time you have completed this task, you will be able to copy both a complete diskette and a single file from a diskette. Some programs are difficult to copy because they contain more than one file or are chained together in parts. You can see this by listing the catalog for the MECC Demo disk. Odell Lake has two different files. Hurkle, too, requires chaining. For this task, we'll concentrate on single files.

TO COPY A SINGLE FILE:

You are going to copy a program to your slave diskette.

There are two methods for copying, an easy method and a more complicated one. For files which are programs written in Applesoft (A) or Integer BASIC (I), the easy method works just fine.

EASY METHOD

1. Boot the diskette that contains the program you want to copy.

2. Press RESET (or hold down CTRL and press RESET) to get the prompt and cursor. Then type CATALOG and write down the exact name (same spelling and spacing) of the program you wish to copy. (You do not need the letter or numbers preceding the program name on the CATALOG.)

3. Make sure that you have a prompt and cursor again (NOTE: Some catalogs are lengthy and you have to press the space bar a couple of times to get to the end of the catalog and get a prompt and cursor.) Type]LOAD programname <Press RETURN.>

4. Remove the original diskette.

5. Insert your initialized diskette.

6. Type]SAVE programname <press RETURN.>

That's all there is to it.

Type]CATALOG to see if your disk contains the new program. Now try RUNning the new program.

FID METHOD

1. Boot DOS with the System Master diskette. A program called FID is located on this diskette.

2. Type]BRUN FID <press RETURN>

3. Choose option #1, (COPY FILES) and press RETURN.

4. When the prompt says SOURCE? enter 6.

5. When the prompt says DRIVE? enter 1.

6. When the prompt says DESTINATION SLOT? enter 6.

7. When the prompt says DRIVE?, enter 1

8. When the prompt says FILE NAME?, enter the catalog name of the program you want to copy without the letter or numbers. Remember, all spelling and spacing must be exact. If you do not know the exact name of the program or if you are going to copy more than one program, type an = sign at the question mark. The screen will read: DO YOU WANT PROMPTING? Answer YES.

9. Insert the original diskette and follow the directions on the screen. If you have requested prompting, the computer will read the names of files and you need to answer Y or N and press RETURN. Continue following directions. Once again, you will be alternating diskettes frequently because you have only one disk drive.

TO COPY A COMPLETE DISKETTE:

Note: A new, blank diskette does not have to be initialized before using it to make a duplicate copy of another complete diskette. The COPYA program initializes the diskette before starting to copy. For that reason you are to use the backside of the disk. See Lab Assistant for instructions.

The copying procedure is slightly different depending upon whether you have just one disk drive or two disk drives. If you have just ONE DISK DRIVE, do the following:

1. Boot the DOS System Master, COPYA is the program you wish to run.

2. Type]RUN COPYA <press RETURN>

3. When the red light on the disk drive goes out, remove the System Master diskette.

4. When asked for original slot, press RETURN. When asked for drive, press RETURN.

5. When asked for duplicate slot, press RETURN once.

6. When asked for destination drive, type 1 (and press RETURN).

7. Follow the directions on the screen. The original or source diskette (the one you wish to copy) goes in first.

8. Wait for prompting to insert the duplicate (new) diskette. (The computer reads and copies only a little section of the disk at a time, so you will be changing the original and duplicate repeatedly.)

If you have TWO DISK DRIVES, follow this procedure.

1. Boot the DOS System Master.

2. Type]RUN COPYA <press RETURN>

3. When the red light on the disk drive goes out, remove the System Master diskette.

4. When asked for original slot, press RETURN twice.

5. When asked for duplicate slot, press RETURN twice.

6. Insert the original you are copying into DRIVE 1 and the new diskette into DRIVE 2. It is very important that you get the right diskette into the right drive, or you will erase the original diskette. Woe.

7. Press RETURN to begin copying.

8. Do not remove the diskettes until the monitor tells you that the process has been completed and asks if you would like to make another copy.

EASY, RIGHT?

TASK 6: WRITE A PROGRAM IN BASIC

This sounds tough, but it isn't. A computer is a dumb beast and must be told exactly what to do. you will give the computer commands in BASIC that it can understand. Use the diskette that you initialized in Task Four. You will get a slave disk heading and a prompt followed by a cursor.

Type NEW and press RETURN. The brackets indicate that you press the key with that label on it instead of typing the word. NEW tells the computer to erase old commands and start a new program. Get in the habit of typing NEW before you begin each new program. One other thing - if you goof, back up with the left arrow and type over it. If a whole line is wrong and you have already pressed RETURN, just type the whole line over. When the computer runs the program, it will ignore the first line with that number and type the correct one.

Type

```
]10 HOME  (and press RETURN)
```

HOME tells the computer that your program will start at the top of the screen.

Type

```
]20 PRINT "THIS COMPUTER IS YOUR SLAVE!  TELL ME WHAT TO
DO!"  (press RETURN)
```

The PRINT command tells the computer to print whatever is inside the quotation marks.

Let's see if the program works. Type RUN (and press RETURN)

How about that! Now, to see your list of instructions (program) type LIST (and press RETURN)

You now know the following commands: NEW, CATALOG, RUN, HOME, LIST, AND PRINT. Let's look at something else the print command can do.

Type]NEW <press RETURN>

```
]10 HOME
]20 PRINT  4 + 5
]RUN
```

What happened? The computer will print the result of a numeric process. If you would like to try other numeric process, use the following symbols:

```
- for subtraction
* for multiplication
/ for division
```

Now type NEW

```
]10 HOME
]20 PRINT "THIS COMPUTER"
]30 PRINT "NEVER MAKES"
]40 PRINT "MISTAKES"
]50 GOTO 40
]RUN
```

What happened this time? The command GOTO 40 tells the computer to go back to line 40. It does. It prints MISTAKES and goes on to line 50, which sends it back to 40 and so forth. This is called a loop and this particular loop is an endless loop. To get out of it, hold down CTRL and press C and RETURN. It will then say BREAK IN LINE XX. This tells you at what line number the program stopped.

Now you will learn the FOR/NEXT commands which let you limit a loop.

Type

```
NEW
]10 HOME
]20 FOR X = 1 TO 10
]30 PRINT " (Type your name here - no parentheses)"
]40 NEXT X
]50 END
```

Before you run this program, type]SAVE yourname <press RETURN> The drive light will come on and your program will be saved to the disk. After the disk drive light goes out and you see a prompt and cursor, type RUN.

Aha! If everything went right and you remembered the quotation marks, your name should have printed ten times on the screen.
Congratulations! You have just written a program with a for/next loop! Would you like to make it fancy?

Type LIST: add these lines by just typing them in at the end of the list, one line at a time.

```
]25 INVERSE
]45 NORMAL
]RUN
```

Fancier yet? Type

```
]LIST
]25 FLASH
]RUN
```

Type]HOME when it drives you crazy. Then type LIST to get your program again.

Type

]25 (Return)
]45 (Return)

This process makes 25 and 45 blank lines and will remove the obnoxious flashing when the program is run again. RUN your program again.

You have completed this task, but if you would like to continue programming, try the beginning BASIC tutorial diskette or the MECC manuals entitled Microcomputing for Teachers. A lab assistant will be glad to help you.

It is easy to complete the printer task while you still have your program in the computer. If you don't have the time, save your program to your initialized diskette by typing]SAVE programname. After the disk drive light goes out, type CATALOG and check to make sure that your program is listed.

TASK 7: USING A PRINTER

Using a printer is a very simple matter. Some programs, such as the MECC utility programs, activate the printer automatically; all you have to do is make sure that the printer is turned on (the little Silent Type printer is always on).

In order to activate the printer from the keyboard, you must have a prompt and a cursor. Then type:

```
]PR#1
```

This command turns the printer on. The printer card must be in slot number one. If you want to turn it off, type:

```
]PR#0
```

Try using this command in two different ways. First, load a short program into the computer again. Next, turn the printer on and type PR#1. Then type LIST, and the printer will print all of the instructions for your program. Easy, right? Once it finishes printing, remember to type PR#0 to turn it off.

Second, insert a diskette of programs that have not been copy protected into a disk drive and boot. Be sure you have a prompt and cursor. (You may need to press CTRL and RESET.) Then select a program and type.

```
]LOAD programname
```

Turn on the printer and type:

```
]PR#1
```

Then type:

```
]LIST
```

The printer will print the complete program. Some lines won't make sense to you, but you will recognize some of the commands. To stop printing in the middle use CTRL RESET.

Then type PR#0 to turn the printer off again.

These instructions will work most of the time. If you are using a different language, the instructions will be different. Some programs, particularly word processing programs, will use control characters to activate the printer. Refer to the documentation for the program you are using and to the manual that came with your printer.

TASK 8: TYPES OF EDUCATIONAL COMPUTER PROGRAMS

By the time you have completed this task, you will be able to list and describe six main types of computer programs and you will have run a sample of each one.

The major types of educational computer programs today include tutorials, drill and practice, problem solving, simulations, games, and data analysis. (Word processing programs, filing systems, and financial spread sheets can all be included in the latter category.) In the early days of educational computer use, the emphasis was on tutorials and drill and practice. While both types of programs are still used and will continue to be used, the focus has shifted to programs that require higher level thinking skills of the student and utilize more of the computer's potential; ie., games, simulations, problem solving, and data analysis.

1. TUTORIALS actually teach subject matter to students. Some, like the MECC materials, are designed to supplement a regular course. Others are designed as complete courses in themselves. Examples of the latter are the Individualized Study by Technology (IST) courses available through the State of Alaska Department of Education. See the Alaska Manual for Educational Computing for more information.

2. DRILL AND PRACTICE programs offer exactly what the name implies. Students should have received instruction in the subject area before running drill and practice programs.

3. SIMULATIONS represent models of situations, either hypothetical or real, that are difficult, due to cost, hazard or other reasons, to reproduce in another manner. They can offer the students the opportunity to visualize and deal with more complex patterns and problems.

4. PROBLEM SOLVING programs help the students learn logical thought processes to solve problems. They can take many forms and do not always focus on math. Seymour Papert in his classic book entitled MINDSTORMS: CHILDREN, COMPUTERS, AND POWERFUL IDEAS (It's on the shelf. If you read any book about computers, read this one!!!), discusses many aspects of computer use for problem solving and offers LOGO as an excellent model. You will be using LOGO in the lab.

5. EDUCATIONAL GAMES can help reinforce and teach concepts. All classification systems are rather arbitrary, and many games could properly be included under the heading of problem solving programs. Many require higher level thinking skills than tutorials and drill and practice programs.

6. DATA ANALYSIS PROGRAMS generally accept input that is user relevant, analyze that data, and print out the results of analysis. They are becoming more popular and will find increasing uses in schools.

You will have a better understanding of the types of programs once you have run a sample of each. Boot the MECC DEMO diskette again, and then run the following sample programs:

Drill and Practice - Music
Tutorial - Mathematics
Simulation - Science (You'll be a fish. It's fun!)
Educational Game - Mathematic

Four down and two to go! Remove the MECC Demo diskette and replace it in its binder. Then select the MECC FOOD FACTS diskette from the HEALTH binder. Run the program entitled FAST FOODS to see a sample of a data analysis program.

TASK 9: CLASS MANAGEMENT INSTRUCTIONAL PROGRAMS

Some drill and practice and tutorial programs contain a class/student management system that allows a teacher to specify which lessons or problems will be given to each student. The computer then presents the material, keeps track of student progress, and provides the teacher with reports and charts of student progress. In order to complete this task, you will add a class, enter students, make student assignments, do the assignment as a student would, check the student's progress, and delete your class from the diskette.

A number of the schools do use the Milliken Math Series and it is an excellent example of a class/student management system. The lab has one Milliken diskette, the Milliken Decimals Sequence, which is representative of the entire series. The diskette is accompanied by a teacher's guide that is quite complete and easy to follow. (Please note, however, that when the Milliken guide discusses "initializing a diskette," it is not referring to the process of preparing a blank diskette for use with the Apple: it is simply explaining how to enter your name, classes, and students on the Milliken diskette.)

Please refer to the Milliken teacher's guide when you have questions, but basically the procedure is as follows:

1. Insert the Milliken diskette into the disk drive and load the program. The screen will read
   PROGRAM LOADING
   PLEASE WAIT

2. When the title frame appears on the screen, and the disk drive light goes out, hold down the control key [CTRL] and press the I key.

3. The screen will read:

   A. ADD A CLASS
   B. PRINT THE PASSWORD OF A CLASS
   WHICH LETTER?

   Press A because this option allow you to enter new classes and teachers. The diskette will hold a maximum of 5 classes and 100 students. Class names must be limited to 10 characters.

4. The computer will read:

   NAME OF TEACHER TO ADD? - - - - - - - -

   Type your name or abbreviate it and press return. Your name must be entered exactly the same way each time.

5. The computer will prompt:

   CLASS NAME?

   Type a class name (keep it SHORT) and press RETURN.

6. The computer will prompt:

   PASSWORD?

   Type an easily remembered password which consists of 5 letters or less and press RETURN. (X's will appear on the screen because in order to insure secrecy, passwords are never displayed.)

7. The add a class option will appear on the screen. Press RETURN to go back to the title page.

8. When the title page appears, press any key to go on.

9. The screen will read:

   WHAT IS YOUR NAME?

   Enter your name just as you entered it before and press RETURN.

10. The computer will provide a list of available classes and teachers. Type the number of your class and your password when you are prompted to do so.

11. At this point you have three options. You may:

    A) make special assignments for each student;
    B) make an assignment for an entire class
    C) review the sequence as a student.

    Select A - STUDENT MANAGEMENT PAGE

12. The next prompt will ask which numbered option you would like to select from the student management menu. Select number 1, which is entitled add a student. Enter the names of three students, one at a time, and press RETURN after each. (You'll have to wait a few seconds after each return while the computer records the name on the diskette.)

    Press RETURN again when the computer prompts you for a fourth student. This returns you to the student management menu.

13. Select option number 3 to make assignments. The computer will prompt:

    NAME OF STUDENT?- - - - - - - - - -

Type in the name of one of the students you entered in step 12 and press RETURN.

The screen will read:

```
(PL 1-56)                          - STUDENT NAME -
ASGN   BEG   END   ML   FL   MP   STATUS
 1      0     0    70   30    6    NONE

1.   ADD ASSIGNMENT 1
WHICH ASSIGNMENT NUMBER?
```

The coding is fairly straightforward.

ASGN = Assignment Number
BEG = Beginning Problem Level
ML = Mastering Level (default level is 70%)
FL = Failure Level (default level is 30%)
MP = Minimum Number of Problems at Each Level
STATUS = Whether or not student has completed lesson

Press number 1 and press RETURN.

The computer will prompt:

BEGINNING LEVEL NUMBER?

Turn to page 49 in the Milliken teacher's guide, examine the various problem levels, and select the beginning problem level that's correct for your student. Then select the ending level number and press RETURN. (Make the assignment <u>short</u> or you'll be sorry later.)

The computer will prompt:

NEW MASTERY LEVEL = %

If you want the default level of 70%, press RETURN. If you choose to change the percentage, type in the new figure. Follow the same procedures for setting the failure level and minimum problems per level. Then press RETURN to continue. You may assign three lessons at one time. However for lab purposes, just assign one and when the computer asks WHICH ASSIGNMENT NUMBER? for the second time, press RETURN.

Follow the same procedure to assign lessons to your other two students and press RETURN when you have finished the assignments.

14. The student management menu will appear again. Press RETURN twice to get back to the title page. Press any key to go on. When the computer asks for your name, type the name of one of your students and take the lesson just as he/she would. Each student needs a password too, and he/she will have to enter it twice. (Tell the students to use short, easily remembered passwords of five letters or less.) If wrong answers don't come naturally for you, insert a couple of them anyway just to see how the program handles incorrect responses. Notice that the program will allow a student one error and still give a score of 100%. At the end of the lesson, the computer will tell the student his/her score and problem level. Press RETURN to go back to the title page.

15. Press any key to go on. Enter your name and press RETURN. Enter the number of your class and your password when prompted to do so. Select A for "student management page." Then select 5 in order to review your student's progress. The report shows the problem levels and per cent correct for each lesson and graphs the student's progress through the problem levels.

16. At this point it is necessary to delete your class in order to save room on the diskette for other classes. Remember that you are the only one who knows your password! Consequently, you are the only one who can delete your class.

    Press RETURN several times to take you back to the screen that presents the options for class management, student management, or review. Select class management this time. From the menu, select the option to delete a class and follow the instructions to delete your class.

TASK 10: EVALUATE SOFTWARE PROGRAMS

There is a considerable amount of information available today concerning program evaluation. Author's generally concur in suggesting that if possible, it is wise to get professional reviews, such as those available from MicroSIFT, a program of the Northwest Regional Educational Laboratory. However, MicroSIFT and programs like it are new, so most of the available software has not been professionally evaluated. Teachers must learn to recognize the difference between high quality software and programs that are inferior.

By the time you complete this task, you will understand the main factors that should be considered in evaluating programs and you will have had the experience of evaluating one program yourself. Since you have not yet worked with very much software or had the chance to use any of it with students, it would be very difficult for you to write an accurate evaluation. Your accuracy will improve after you have worked with more programs and have seen some that are very good and some that are very bad.

Use the form on the following pages to evaluate one program (not a whole diskette). Choose a program that is in your field, hopefully one that you might like to use in a classroom. Consider the following factors and discuss them with a lab assistant who will elaborate upon each concept.

1. CONTENT - The material should be both significant and accurate. In addition, consider the degree to which the program would help meet the objectives of the course in which it is intended to be used.

2. TECHNICAL QUALITY - Important factors are ease of use (user-friendliness), clarity of directions, appearance on the screen, and freedom from bugs. Will the student need a lot of help from the teacher to operate the program?

3. INSTRUCTIONAL FEATURES - Consider the amount of use control (Can the student get out of a program when he is tired of it? Can he select the pace?), the amount of teacher control, appropriate use of

   graphics, sound, animation and voice, summary of student performance, appropriate feedback and branching for remediation.

4. SUITABILITY FOR GRADE LEVEL - The readability is important, as are student time, prerequisite skills, ability level required, and the structure.

5. DOCUMENTATION - The printed supplementary materials that accompany a diskette, including worksheets, instructions, background information, and suggestions for classroom use can really add to the net worth of a program. Are these materials clear and concise? Some program offer no documentation at all, while others present you with 200 cross-referenced, confusing pages!

In addition, be sure to note the program's hardware requirements. It is impossible to run a program written in Integer BASIC on an Apple II or II+ unless it has either a language card or an Integer card. Some programs require a printer, paddles or joystick, or a modem.

Please feel free to ask the lab assistant for help or clarification in any area.

Note: The evaluation form was designed by the State of Alaska Department of Education. Additional forms are available.

BEST COPY AVAILABLE

SOFTWARE EVALUATION CHECKLIST

PROGRAM NAME: _____ SOURCE: _____ COST: _____

SUBJECT AREA: _____ REVIEWER'S NAME: _____ DATE: _____

1. INSTRUCTIONAL RANGE

_____ grade level(s)

_____ ability level(s)

2. INSTRUCTIONAL GROUPING FOR PROGRAM USE

___ individual

___ small group (size: _____)

___ large group (size: _____)

3. EXECUTION TIME

_____ minutes (estimated) for average use

4. PROGRAM USE(S)

___ drill or practice

___ tutorial

___ simulation

___ instructional gaming

___ problem solving

___ informational

___ other (_____)

5. USER ORIENTATION: INSTRUCTOR'S POINT OF VIEW

low				*high*	
•	•	•	•	•	flexibility
•	•	•	•	•	freedom from need to intervene or assist

6. USER ORIENTATION: STUDENT'S POINT OF VIEW

low				*high*	
•	•	•	•	•	quality of directions (clarity)
•	•	•	•	•	quality of output (content and tone)
•	•	•	•	•	quality of screen formatting
•	•	•	•	•	freedom from need for external information
•	•	•	•	•	freedom from disruption by system errors
•	•	•	•	•	simplicity of user input

7. CONTENT

low				*high*	
•	•	•	•	•	instructional focus
•	•	•	•	•	instructional significance
•	•	•	•	•	soundness or validity
•	•	•	•	•	compatibility with other materials used

8. MOTIVATION AND INSTRUCTIONAL STYLE

passive				*active*	
•	•	•	•	•	type of student involvement

low				*high*	
•	•	•	•	•	degree of student control

none	*poor*			*good*	
•	•	•	•	•	use of game format
•	•	•	•	•	use of still graphics
•	•	•	•	•	use of animation
•	•	•	•	•	use of color
•	•	•	•	•	use of voice input and output
•	•	•	•	•	use of nonvoice audio
•	•	•	•	•	use of light pen
•	•	•	•	•	use of ancillary materials
•	•	•	•	•	use of _____

9. SOCIAL CHARACTERISTICS

present and negative	*not present*	*present and positive*	
_____	_____	_____	competition
_____	_____	_____	cooperation
_____	_____	_____	humanizing of computer
_____	_____	_____	moral issues or value judgments
_____	_____	_____	summary of student performance

TASK 11: PROGRAMS FOR ONE GRADE OR SUBJECT

This is an easy one! You already know how to run programs, so all you have to do is select five programs that pertain to your subject area or grade level and run them. Try to get a variety. Run at least two MECC programs and at least one from Public Domain or commercial software if possible. Ask a lab assistant for suggestions.

Every MECC disk has a teacher's manual. Be sure you are reading the manual as you preview the disk. The MECC index is available in the lab for referencing programs by title, subject area, and level. Anchorage School District's MATH Scope and Sequence has software correlated to objectives.

This will give you a feel for the kind of programs that are currently available in your area. The lab doesn't have a complete selection, but it does have a sample for each area. As you look at the programs, try to figure out how you could fit them into your lesson plans. Remember, most of them are intended to be used as supplements for classroom instruction. It is important that computer programs be integrated into the curriculum and not just presented as "something extra."

Have fun!

TASK 12: PROBLEM SOLVING USING LOGO

Logo is the name for a philosophy of education. Its learning environments articulate the prinicple that giving people personal control over powerful computational resources can enable them to establish intimate contact with profound ideas from science, from mathematics, and from the art of intellectual model building. Its computer languages are designed to transform computers into flexible tools to aid in learning, in playing and in exploring.

Logo's designers are guided by the vision of an educational tool with no threshold and no ceiling. Even young children can control the computer in self-directed ways, even at their very first exposure to Logo. At the same time, Logo should be a general purpose programming system of considerable power and wealth of expression.

Another important feature of Logo is its incorporation of programming area called turtle geometry. A turtle is a computer-controlled "cybernetic animal" that lives on the display screen and responds to Logo commands that make it move (FORWARD or BACK) and rotate (LEFT or RIGHT). As the turtle moves, it leaves a trace of its path and in this way can be used to make drawings on the display screen.*

*Taken from LOGO for the Apple II, Harold Abelson

Find the LOGO Language diskette which is located in the gray binder labeled TERRAPIN LOGO LANGUAGE. (Note: there is also a utilities diskette; don't get the wrong one.) Boot the disk and you will see the LOGO heading followed by:

```
WELCOME TO LOGO
?
```

Remove the LOGO language diskette and replace it with a lab slave disk which the lab assistant will give you. Then type DRAW to enter the graphics mode and press the RETURN key. The turtle will appear in the middle of the screen and the prompt will move to the lower left corner. Four lines at the bottom will be used for programming and the remainder of the screen will be reserved for drawing.

Your job is to teach the turtle how to make certain designs. You will need to know a few commands.

FD means FORWARD. Follow this command by a space and the number of steps you want the turtle to move forward.
Example: FD 100

BK means BACKWARD. Follow this command by a space and the number of steps you want the turtle to move backward.
Example: BK 50

RT means RIGHT TURN. Follow this command by a space and the number of degrees you want the turtle to turn right.
Example: RT 60

LT means LEFT TURN. (Same as above.)

DRAW not only lets you enter the graphic mode, but it will also erase a picture you have just drawn so that you may start over.

REPEAT (not rept key) followed by a space and a number (x) tells the computer to
make the turtle draw the sequence in the brackets that follows it (x) times.
Example: REPEAT 4 [FD 25 RT 60] (NOTE: In order to type brackets in LOGO, press the SHIFT key and type N for the left bracket and M for the right bracket.)

HT means HIDE TURTLE. Sometimes you will want to hide the turtle so that you can see your complete line or pattern more clearly. In addition, when the turtle is hidden the pattern is drawn more quickly.

ST means SHOW TURTLE. You use this command to get your turtle back on the screen.

PU means pen up, the turtle will move but not draw.

PD means pen down, the turtle will draw a line as it moves.

Try these commands and make some designs. If you inadvertently type the wrong character when you are programming, press the ESC key to delete it. You may also move the cursor by using the right and left arrows. Try it!

Now for some problems and some problem solving! Teach the turtle how to:

a. make a square
b. make a triangle.
c. make a circle.
d. make your initials.

If you want to see more of the program you are writing, hold the CONTROL key down and type T (for TEXT) To get the split screen back, hold the CONTROL key down and type S (for SPLIT). If you want to see your drawing without any text, hold the CONTROL key down and type F (for FULL SCREEN)

You can teach the turtle a PROCEDURE, a set of instructions to make a certain design, so that you don't have to type in all of the instructions every time.

To write a procedure for making a square, type TO SQUARE after the prompt and press RETURN. The screen will change to edit mode, the words TO SQUARE will appear at the top of the screen, and the cursor will be on the line under the words. Type in your instructions for making a square. If you make a mistake, use the ESC key to delete a character. If you really goof, hold the CONTROL key down and type G. When you get it just the way you want it, hold the CONTROL key down and type C. LOGO will define your procedure, give the message SQUARE DEFINED, and return you to the drawing mode.

You have just written a procedure! Great! Now let's see if it works. Once LOGO has returned you to the drawing mode and you have the turtle and the prompt, type SQUARE. (Don't type the period. That's just the end of the sentence.) The turtle should draw your square. Hope he did! If not, grab a lab assistant and try again.

One more problem. Write a procedure to make the turtle draw your square and then rotate 60 degrees and draw another square. Have the turtle repeat this process six times. Name this procedure whatever you like but show the results to a lab assistant. (Remember to write a procedure, type TO name.)

Save your procedures to the slave disk by typing SAVE "SHAPES (You may use another name besides shapes if you like.) Don't forget to put a space after SAVE and a quotation mark before the name of the set of procedures you are saving.

You have just completed the introductory lesson for problem solving in LOGO, but there is so much more to learn! LOGO is a powerful language that can challenge all students. They can learn to write animated programs with graphics and text, save their pictures by using a printer, compose songs, do math and a variety of other things. Cathy Chiemelovsky, who is the director of computer services for the Fairbanks North Star Borough School District, has written some suggestions for using LOGO with young children. Hopefully, you will feel inclined to proceed with LOGO on your own. The lab has a collection of articles about LOGO and Seymour Papert's classic book on the subject, Mindstorms: Children, computers and powerful ideas. The lab also has Abelson's book entitled Apple Logo, which has a number of good ideas for programming projects. Be sure to consult the documentation that comes with the Terrapin LOGO diskettes for ideas too. ENJOY!!

TASK 13: USE AN AUTHORING SYSTEM

An authoring system is a program that allows a teacher to use a certain format to create his/her own instructionl materials. The teacher needs no knowledge of programming in order to use an authoring system. Any teacher can make materials for any subject area.

By the time you have completed the steps in this task, you will be able to write computerized reviews or tests and a word find puzzle. Use the MECC diskette entitled TEACHER UTILITIES VOLUME 1 for reference, which is located in the binder entitled TEACHER UTILITIES AND SCHOOL UTILITIES. Be sure to select an Apple that has a printer attached if you would like to print a puzzle or test.

PART "A": Create and run one two-item review using MECC REVIEW LOAD

1. Use the Teacher Utilities Volume One diskette. The only tricky part about the menu is that you must use #10 REVIEW LOAD and create a file before you can use #9 REVIEW OR #11 TEST GENERATOR. Select 10.

2. You will be given 5 options. Select 1 (CREATE A NEW TEST). You are going to use this disk for data. Press the space bar.

3. Give your file a short, easy name. (Write it down so you will remember the name!)

4. Enter N for the question concerning objective numbers.

5. Answer the next set of questions.
   Percentage? (you pick)
   Report? YES

6. Follow the directions. You may make a question and answer review. See page 59 for suggestions on how to write appropriate questions. Press RETURN when finished with question or answer. Type END, press RETURN. Put in at least 2 questions.

   Enter your answer for the question exactly as you want the student to enter it.

7. Once you have finished entering all questions, press ESC to end. This will return you to the REVIEW LOAD menu.

8. Select 2. EDIT.

9. Select 2) CHANGE and follow the directions on the screen.

10. When you are back to the edit menu, select 6) RETURN and then 5) END. Press space bar to continue.

11. Chooose #9 REVIEW

12. Enter your name and the name of the program (remember what you called it?) when asked for the information, and take the review as if you were a student.

13. When you have finished, select 9 again, but when it asks for your name, enter *REPORT*. The computer will give you the score of each student who took the test.

14. Return to the menu and select 10 again. Delete (#3) the file you made so that there is enough room on the diskette for other students to enter files. Thanks.

Creat! You've finished the hardest part!

PART "B": Create and run a ten-word WORD FIND puzzle.

Use WORD FIND EDIT first. Be sure to use an Apple that has a printer attached.

1. Select WORD FIND EDIT (#6). Select #1 on menu. Give puzzle an easy name. Press space bar and go on.

2. The computer will ask you to enter your words one at a time and press RETURN when finished. Enter one word and press RETURN. The computer will then read: 2.?

3. Enter your second word and press RETURN. Proceed in this manner until you have entered all 10 of your words.

4. After the last word, press RETURN at a blank.

5. Follow the line directions.

6. Select #5 (RETURN)

7. Select #5 WORD FIND

8. Answer the questions.

9. Don't panic. Give the computer time to "think."

10. The computer will tell you to turn your printer on. If you are using the little Apple Silent Type printer, it is always on so you don't have to do anything. If you are using one of the others, just press the ON button.

11. If you don't have a printer attached the computer will print it on the screen for you. It will always give you a key first and then the puzzle itself. You may have the words printed at the end if you wish.

You will find that students love to make these puzzles themselves and present them to the class. Such projects can really help a student improve his/her self-concept.

TASK 14: WORD PROCESSING

Word processors are creeping into English classrooms. They present a quick and easy way for students to write and revise their work. Several studies have demonstrated that students spend more time revising their work when it is done on a word processor than they do when they write it long hand. Students can use it to write themes or papers for any class, and it's so easy to correct errors that it makes the whole process enjoyable! Try it! You'll like it!

We have two word processing systems in the lab, SuperText and the Bank Street Writer. Both are good, but they have different purposes. SuperText has more power and is less cumbersome once you understand and remember all of the commands, but Bank Street Writer is far simpler to use, particularly since all of the commands are right on the screen. Bank Street Writer is being used in elementary schools, as well as high schools, so it's a good idea to be familiar with it.

The Bank Street Writer has a double sided disk. One side is a tutorial that teaches you how to use the system. The other side is the program itself. Run the tutorial first. It should give you all of the information you need to run the program. If you want a bit more clarification, refer to the short documentation booklet that accompanies the diskette.

Once you have competed the tutorial, run the program. Type two paragraphs on any subject you like. Then, use the edit mode to change the first sentence in one of the paragraphs. Finally, transfer to the print mode and use it to print your text in 80 column, single spaced format. Ask a lab assistant for help in setting the printing parameters.

If you would prefer to work with SuperText, that's fine. Review the documentation and ask a lab assistant for help.

TASK 15: USE A MODEM TO ACESS THE ALASKA KNOWLEDGE BASE

Just as we teach students library skills in order to help them gain information, we must now be able to teach new methods of access, computerized methods. Two high schools in the Anchorage School District are ordering a commercial program entitled THE SOURCE. It will allow teachers and students ready access to the Library of Congress, latest legislative reports, latest Supreme Court decisions, Dow Jones reports, and articles on a variety of topics.

There are two problems associated with modem use. First, all of the long distance sources are very expensive to use. Second, the sources will frequently be busy and won't accept the call. Nevertheless, the problems are not insurmountable, and computer access of information will be commonplace in schools very shortly.

You will use the modem to access the Alaska Knowledge Base, which is a computerized support system of educational resources. It contains abstracts, or descriptions, of over 900 resources in seven categories. The purpose of the Alaska Knowledge Base is to make current education information and resources easily accessible to every school district. It is somewhat similar to the ERIC system in that it uses "descriptors" or describing words to search for information. Please read through the list of descriptors (the list is available in the computer lab), pick some that sound interesting to you, and do one search of your own.

HINTS:

This procedure is getting you into a "restricted-access system; thus, it may sound a bit complicated. Relax - the only thing that can go wrong is that you may have to be patient and re-enter a few words.

For security reasons, the system was designed so that NOTHING you type appears on the screen. It feels weird, but have faith. What you type IS going out over the phone lines.

The EMS system closes up at 6:00 p.m.local time; shop early and avoid the rush.

Use only "AND?" spots to enter your descriptors. Enter only RETURN after the "OR?" questions and you'll save LOTS of time. ("OR?" broadens the search tremendously. Do feel free to use it if you care to, but be prepared to stay for the full print-out.)

When the system asks you to turn on your printer, just press RETURN. The search information will appear on the screen. Read quickly!

For steps 10 (Identifier) and 11 (Region) of the access procedure, just press RETURN

If you get confused, try typing HELP and press RETURN. This sometimes works. If it doesn't, grab a lab assistant. If you can't find a lab assistant, find Dr. Van Dusseldorp; he is our resident expert and he wrote the program!

INFORMATION RETRIEVAL BY DESCRIPTOR

A current DESCRIPTOR List is provided in the computer lab. Get that list before continuing. A list may also be obtained from the computer.

Before beginning a search using the Descriptor method read the following information carefully:

A. The descriptor list provided is an alphabetical list of educational terms that have been programmed into the computer. The computer recognizes only these terms from this list. If a particular subject is not listed, try a related term from the list.

B. The computer provides an opportunity to use several descriptors at one time to ensure that the correct information will be received. The method used is by AND'S and OR'S.

For example, the subject to be searched may be BILINGUAL EDUCATION, and CURRICULUM and SECONDARY EDUCATION.

If you type ONLY BILINGUAL EDUCATION, too much information will be received unrelated to CURRICULUM. Therefore you need to type in the word CURRICULUM to "Narrow" the search and SECONDARY EDUCATION to limit it further by grade level.

Example:

```
AND?:  BILINGUAL EDUCATION (RETURN)
OR?:   (RETURN)
AND?:  CURRICULUM (RETURN)
OR?:   (RETURN)
AND?:  SECONDARY EDUCATION (RETURN)
```

The computer searches the files and finds ONLY those abstracts with All Three Descriptors on them.

If you type -

```
AND?:  BILINGUAL EDUCATION
OR?:   CURRICULUM
OR?:   SECONDARY EDUCATION
```

the computer finds all abstracts having BILINGUAL EDUCATION as a descriptor AND All abstracts that have CURRICULUM as a descriptor, and All abstracts that have SECONDARY EDUCATION as a descriptor. Each may be completely unrelated to BILINGUAL EDUCATION. Therefore, it is essential to use the AND'S and OR'S in the correct manner.

WHAT RESOURCES CAN BE FOUND IN THE ALASKA KNOWLEDGE BASE?

ALASKA DEVELOPED INSTRUCTIONAL MATERIALS:
abstracts and microfiche of the contents of curriculum guides, UNIPACS, handbooks, learning experiences and teaching models developed and tested by Alaskan authors, educators and agencies

ALASKA TALENT BANK:
in-state specialists available for assistance in a variety of subject area, such as reading, special education, bilingual studies, community education, math, art and career/vocational education

PROMISING PRACTICES:
exemplary curriculum program from other states, appropriate for Alaska, which have met rigorous criteria for testing their value to other schools

NATIONALLY VALIDATED PROGRAMS:
exemplary curriculum programs from other states, appropriate for Alaska, which have met rigorous criteria for testing their value to other schools.

COMMERCIAL RESOURCES:
descriptions of companies that provide educational materials, such as textbooks and supplemental classroom materials, audio-visual equipment, and school services to Alaska school districts

SERVICE AGENCIES:
agencies that provide various services to school districts including Department of Education units, resource centers in-state and outside, educational associations and college

CLIENT PROFILES:
a descriptive profile of each school district in the state

MERITS:
a collection of successful practices taking place in local schools and districts including units, courses, methods, activities or techniques that support a particular subject area.

TO USE THE MODEM:

1. Check with lab assistant to be sure phone is free.

2. Use the MODEM (AUTODIAL) diskette from the MODEM PROGRAMS binder.

3. Boot the disk and select ANCHORAGE EMS.

4. The computer will dial the number automatically and the message "Await Carr (carrier)" will appear.

5. The computer will tell you if the line is busy.

6. Press RETURN slowly until the computer prints USER? Type the number 180/45 and press RETURN

7. The computer prints PASSWORD:
   Type the word SPAN and press RETURN

8. The computer sometimes prints READY
   Type the word SPAN and press RETURN

9. Now the SPAN user menu will appear:

   IR Information Retrieval
   DL Descriptor List
   RD Region District List
   EX Exit

10. Computer prints ENTER PROGRAM MNEMONIC?
    Enter IR and press RETURN

11. Computer prints heading, then RUN BY (E=EXIT)?
    Enter ANCHORAGE and press RETURN.

12. Computer prints RUN FOR (E=EXIT)?
    Enter ANCHORAGE and press RETURN

13. Computer prints SEARCHER'S NAME?
    Enter your initials and press RETURN Select D, answer y or n

14. This is where you enter your descriptors:

    Computer prints AND:? OR:? OR:?

    The computer will display AND'S and OR'S AS LONG AS DESCRIPTORS ARE ENTERED (a maximum of 8 AND'S with 2 OR'S for each AND.) When all AND descriptors have been entered, press RETURN

15. Computer prints IDENTIFIER ([RETURN] FOR NONE)? Press RETURN

On the last page of the descriptor list is a list of identifiers which have been programmed into the computer. These terms relate to a specific subject not listed as a descriptor. Abstracts may be retrieved by typing an identifier at this prompt; however, DO NOT TYPE ANY DESCRIPTORS ON THE PREVIOUS PROMPTS WHEN USING AN IDENTIFIER.

16. Computer prints REGION ([RETURN] FOR NONE)?
Press RETURN

At this prompt you may enter a regional code (A list of codes and regions may be obtained from manuals available in the computer lab.) This prompt is generally used as an aid to receiving information from the Talent Bank file, as human

resources are listed by region where they reside. However, several other categories are also listed by region.

Computer prints
INDICATE WHICH ITEMS ARE TO BE PRINTED
Enter Y for yes or N for no and press RETURN after each of item. (These Y's and N's are only examples. Do as you wish for you own searches.)

ID#	? Y and press RETURN
Type	? Y
Name/Title	? Y
Address	? N
Telephone	? Y
Contact Person	? Y
Date	? N
Cost/Fee	? N
Description	? N
Identifiers	? Y
Descriptors	? N
Region	? N
Search Summary	? Y

Computer prints READY PRINTER AND (RETURN) (E=EXIT)
Press RETURN

The information will now be printed.

18. Computer prints READY

Enter

a. To say Goodbye, type BYE and press RETURN
Computer the prints CONFIRM?
Type YES and press RETURN

b. To do another search, type SPAN and press RETURN

TASK 16: IDENTIFY AND DESCRIBE THE PURPOSE OF REFERENCE MATERIALS

There are many materials that can provide you with more information about the Apple and ideas for using it in the classroom. You should be able to identify and cite the main purpose of the following materials.

MECC CATALOG - offers a complete list of MECC diskettes that are available in Alaska.

THE APPLE BOOK and other commercial catalogs - provide software evaluations for the most programs that are currently available for the Apple. The evaluations may not be accurate, but they can give you an indication of the quality and an idea of what the program is designed to do.

THE APPLE DOS GUIDE and PROGRAMMING MANUAL - give you necessary information about running the apple and programming in Applesoft Basic.

AACE (Alaska Association for Computers in Education) NEWSLETTERS - provide information about how computers are being used in other areas of the state.

AEDS MONITOR and JOURNAL - provide information about computer programs in other parts of the nation, and present articles by some of the leaders in the field. AEDS stands for Association for Educational Data Systems.

Educational computer magazines - the two in the lab are CLASSROOM COMPUTER NEWS and THE COMPUTING TEACHER. Both provide new ideas, software evaluations, and programs you may enter on a disk and use in the classroom.

MINDSTORMS: CHILDREN, COMPUTERS AND POWERFUL IDEAS - Seymour Papert's book on computer use is a classic and you would enjoy reading it. It shows the potential of computers in education and urges teachers to move away from drill and practice and toward problem solving.

ALASKA MANUAL FOR EDUCATIONAL COMPUTING - produced in 1983 by The Northern Institute for the Department of Education, this volume gives a good overview of educational uses of computers in Alaska and provides detailed instructions for using the computer and materials.

SCHOOL OF EDUCATION
UNIVERSITY OF ALASKA, ANCHORAGE
COMPUTER PROFICIENCY CHECKLIST

STUDENT NAME: _____ PROGRAM: _____

PROFICIENCY	DATE COMPLETED	LAB ASSISTANT INITIALS
1. Computer Terminology Worksheet		
2. a. Watch "Troubleshooting Your Apple."		
b. Demonstrate the maintenance procedures listed in the lab guide.		
3. a. Demonstrate auto start and warm start methods of booting a disk.		
b. Select and run two programs from a menu and two programs from a catalog.		
4. Initialize a blank diskette.		
5. a. Copy a single file from a diskette.		
b. Copy a complete diskette.		
6. Write and run one six to ten line program in Applesoft Basic that contains a print command, a for/next loop, and an end statement.		
7. Print one of your own programs and one from MECC or Public Domain.		
9. List and describe the six main types of educational computer programs and run a sample of each of them.		

9.	Run a student/class management instructional program.		
10.	a. List and describe the five main factors to consider when evaluating a program.		
	b. Complete an evaluation form for one program.		
11.	Programs for one grade or subject		
12.	Write at least 2 procedures in LOGO		
13.	a. Create and run one two-item test or review using MECC REVLOAD.		
	b. Create and run one ten-word WORD FIND puzzle using MECC Teacher Utility Volume One programs.		
14.	Using Bank Street Writer, write two paragraphs, use the edit function to change the first sentence in one of the paragraphs, and print the resulting text on the printer in 80 column, single spaced format.		
15.	Use the modem to access one information source.		
16.	Identify the reference materials listed in the lab guide and explain the main purpose of each.		